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(71) Applicant  
 Kelth George Howlett  
 511 Whalebone Lane North, Chadwell Heath, Romford,  
 Essex, RM6 5QX, United Kingdom

(72) Inventor  
 Kelth George Howlett

(74) Agent and/or Address for Service  
 E Eder & Co  
 39 Cranbrook Road, Ilford, Essex, IG1 4PA,  
 United Kingdom

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(56) Documents cited  
 GB 2241161 A GB 2113081 A US 4190182 A  
 US 3913172 A

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## (54) Hand carrier with restraining means

(57) A removable carrying handle comprising a substantially rigid structure providing a hand grip integral with a pair of depending legs, at least one recess to receive in use the existing handle(s) of a plastics material carrier bag, and means to restrain removal of the existing bag handle(s) from said recess. Figure 1 shows a hand carrier 10 in the form of an inverted U, with a movable cover flap 14 and snap connector means 16 to restrain removal of the bag handles 15 from recess 12. Figure 2 shows a hand carrier 20 with four resilient tags 23. Bag handles 26 are restrained by the tags from removal from recesses 24, formed at the interconnection of each tag 23 and an adjacent leg 21.

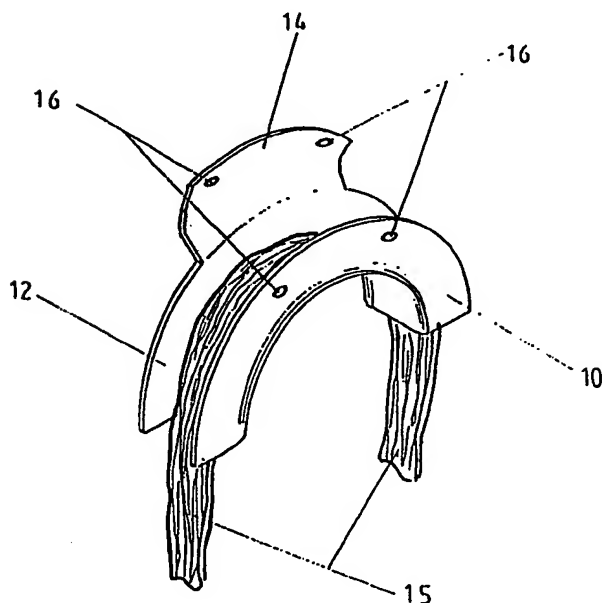


FIG 1



FIG 2

At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1990.

1/2

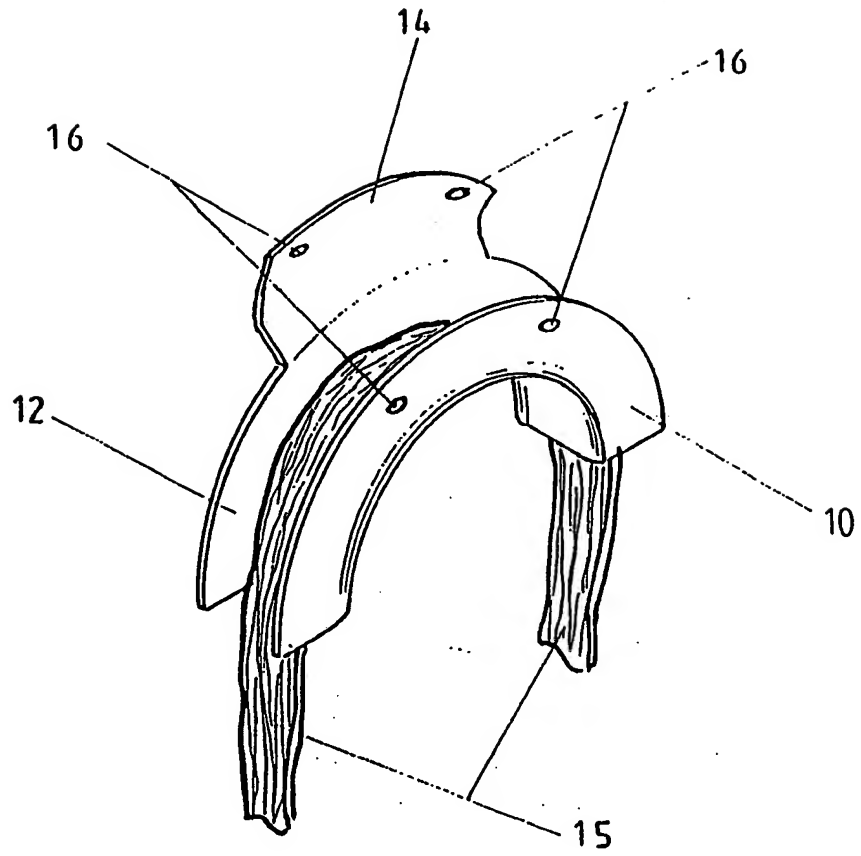


FIG 1



REMOVABLE HANDLES

5

DESCRIPTION

10 This invention relates to removable handles for use in carrying objects, particularly (but not exclusively) for carrying containers, e.g. plastics material carrier bags.

15 Removable carrying handles are known for boxes and like containers that are bound with string. For this function the removable handle comprises a length of wire having a central portion encompassed by a wooden tube - to serve as the hand grip - the projecting ends of the wire being bent to form a pair of wire legs that each terminate in a flat coil of wire to receive the string.

20 Such a prior art arrangement is generally unsuitable for a plastics material carrier bag since the bag handles are difficult to insert into the flat coil wire ends of the removable handle. Also, if several heavy bags are simultaneously carried by the same removable handle, the wire legs are deformed by the load and/or it is difficult  
25 separately to remove a desired one bag.

30 It is therefore considered desirable to provide a removable handle that can be used for plastics material carrier bags and which overcomes or at least minimises the above-mentioned and/or other disadvantages of the prior art.

35 According to one aspect of the invention there is provided a removable carrying handle comprising a substantially rigid structure providing a hand grip integral with a pair of depending legs, at least one recess to receive the existing handle(s) of a plastics material carrier bag, and

means to restrain removal of the existing bag handle(s) from said recess.

5 In one preferred embodiment, the substantially rigid structure has the general shape of an inverted "U" having the recess formed as a groove in its outer and/or upper surface, said restraining means being provided by a movable (e.g. hinged) cover for at least part of the recess.

10 In another preferred embodiment, the substantially rigid structure has the general shape of an inverted "U" and has a plurality of recesses formed by tags integral with the legs of the "U" and upstanding from the leg ends such as generally to be alongside the legs.

15 Preferably, as the tags extend away from the leg ends they bend outwardly and then inwardly towards the legs (preferably into contact with the legs) thereby in use to provide a resilient restraint against removal of the said  
20 existing handle(s) of the plastics material carrier bag.

By way of example, removable handles according to this invention and for plastics material carrier bags will now be described with reference to the accompanying drawings of  
25 which

Figure 1 is a schematic perspective view of a first embodiment of a removable handle according to this invention for use with a plastics material carrier bag, and

30 Figure 2 is a schematic perspective view of a second embodiment of a removable handle according to this invention in use with a plastics material carrier bag.

35 The removable carrying handle 10 of Fig 1 comprises a substantially rigid structure having the general shape of an inverted "U". The outer and/or upper surface of the "U"

is provided with a continuous recess in the form of a groove 12 that is to receive the existing handles 15 of a plastics material carrier bag. Means to restrain removal of the bag's handles is provided by a hinged or otherwise movable cover flap 14 that can cover at least part of the recess 12 - preferably in the vicinity of the bight wall part of the "U" that in use is to provide a hand grip integral with the structure's depending legs. Advantageously the cover flap 14 and part of the "U" are provided with co-operating snap connector means 16 to secure the cover flap in the recess covering position.

The removable carrying handle 20 of Fig 2 comprises a substantially rigid structure having the general shape of an inverted "U", the legs 21 of the "U" being directed inwardly towards one another as they extend away from the bight limb 22 that, in use, provides a hand grip. Tags 23 provided integrally at the ends of the legs 21 are bent back to lie generally alongside the sides of the legs, i.e. two tags 23 per leg 21. Conveniently the tags 23 are bent sideways outwardly and then inwardly towards the legs - preferably into contact with the legs' sides - as they extend away from the ends of legs 21. This is to enable the tags 23 to be urged resiliently away from the sides of the legs during insertion of the handles 26 of a plastics material carrier bag 25, and then to close resiliently towards the sides of the legs to restrain removal of the bag handles 26 from the recesses 24 that are each formed by the portion integrally interconnecting the root of a tag 23 and its associated leg 21.

It will be appreciated that each of the four recesses 24 of the removable carrying handle 20 of Fig 2 can support one or more carrier bags 25. Alternatively each pair of recesses 24, per side of the carrying handle 20, can support one or more carrier bags 25 between them (the

situation illustrated in Fig 2). The outwardly splayed free end of each tag 23 eases entry of a bag's handles 26.

5 It will be noted that, in each of the illustrated embodiments, the load from the contents of the plastics material carrier bag is transmitted via the bag's handles to the bottom of the recess 12 or 24 provided integrally in the removable carrying handle (10 or 20). Further, the or  
10 each recess bottom is of substantial area - considerably greater than a mere wire - and is at least in part inclined to the vertical so as not to create too sharp a directional change in the bag's handles which might otherwise cause them to tear.

15 Moreover, due to the removal restraining means, the carrier bag or bags held in the removable handle can be set down (e.g. on the ground or in the boot or trunk of a car) without becoming accidentally separated from off the removable handle. The retained bags are thus less likely to  
20 open freely. Nevertheless, the bag - or any selected one of several bags - can be readily removed intentionally from off the handle 10 or 20 by operating its restraining means. With removable handle 10 this involves opening the hinged cover flap 14. With removable handle 20 this involves  
25 simply pulling the desired bag handles 26 upwardly to overcome the laterally directed resilient closing force of the tag(s) 23 against the side of leg(s) 21. In either case, the removable carrying handle remains undamaged and can be re-used, e.g. on the next shopping expedition.

30 In each of the illustrated embodiments the underside of the bight of the inverted "U" is of substantial cross-sectional extent, e.g. of the order of 2cms, to provide a comfortable hand grip for a user and to minimise pressure on the palm  
35 or fingers of the user's hand. However, the shape and/or dimensions of the hand grip - and indeed of the structure



as a whole - may be modified without departing from the  
scope of th present invention. Inde d other  
modifications and embodiments of the invention will be  
readily apparent to those skilled in this art. All such  
5 modifications and embodiments are to be deemed within the  
ambit and scope of the invention, and the invention is not  
to be deemed limited to the particular embodiment(s)  
hereinbefore described which may be varied in construction  
and detail without departing from the scope of the patent  
10 monopoly hereby sought.

CLAIMS

1. A removable carrying handle comprising a substantially rigid structure providing a hand grip integral with a pair of depending legs, at least one recess to receive in use the existing handle(s) of a plastics material carrier bag, and means to restrain removal of the existing bag handle(s) from said recess.

2. A removable carrying handle according to Claim 1, wherein the substantially rigid structure has the general shape of an inverted "U" having the said recess formed as a groove in its outer and/or upper surface, the said restraining means being provided by a movable cover for at least part of the recess.

3. A removable carrying handle according to Claim 2, wherein the said restraining means being provided by a hinged cover for at least part of the recess.

4. A removable carrying handle according to Claim 1, wherein the substantially rigid structure has the general shape of an inverted "U" and has a plurality of recesses formed by tags integral with the legs of the "U" and upstanding from the leg ends such as generally to be alongside the legs.

5. A removable carrying handle according to Claim 4 wherein, as the tags extend away from the leg ends, they bend outwardly and then inwardly towards the legs thereby in use to provide a resilient restraint against removal of the said existing handle(s) of the plastics material carrier bag.

6. A removable carrying handle according to Claim 4 or Claim 5 wherein, as the tags extend away from the leg ends, they bend outwardly and then inwardly towards and into contact with the legs thereby in use to provide a resilient

restraint against removal of the said existing handle(s) of the plastics material carrier bag.

5       7.    A removable carrying handle according to any one of Claims 4 to 6, wherein each of the legs of the 'U' has two said tags, one to each side of the leg.

10       8.    A removable carrying handle according to any one of Claims 4 to 7, wherein each of said recesses has its bottom of substantial area and at least in part inclined to the vertical.

15       9.    A removable carrying handle for use with the existing handle(s) of a plastics material carrier bag, said removable carrying handle being substantially as herein described with reference to and/or as illustrated in Fig or Fig 2 of the accompanying drawings.

## Amendments to the claims have been filed as follows

1. A removable carrying handle wherein a substantially rigid structure provides a hand grip integral with a pair of depending legs, each leg terminates in an integral tag that upstands from the leg end to extend generally alongside the leg and define therewith a recess, the two recesses being spaced apart longitudinally of the handle (e.g. by substantially the length of the hand grip) such that they can in use serve individually or as a pair to receive the existing handle(s) of one or more plastics material carrier bags, and the said tags serving to restrain removal of existing bag handle(s) from said recesses.

2. A removable carrying handle wherein a substantially rigid structure provides a hand grip integral with a pair of depending legs, each leg terminates in a pair of integral tags that upstand from the leg end - one tag to each side of the leg - to extend generally alongside the leg and define therewith a pair of recesses, the two recesses on each side of the handle being spaced apart longitudinally of the handle (e.g. by substantially the length of the hand grip) such that they can in use serve individually or as a pair to receive the existing handle(s) of one or more plastics material carrier bags, and the four said tags serving to restrain removal of existing bag handle(s) from said recesses.

3. A removable carrying handle according to Claim 1 or Claim 2, wherein the substantially rigid structure has the general shape of an inverted "U".

4. A removable carrying handle according to any preceding Claim wherein, as the tags extend away from the leg ends, they bend outwardly and then inwardly towards the legs thereby in use to provide a resilient restraint against

removal of the said existing handle(s) of the plastics material carrier bag.

5        5.    A removable carrying handle according to any one of Claims 1 to 3 wherein, as the tags extend away from the leg ends, they bend outwardly and then inwardly towards and into contact with the legs thereby in use to provide a resilient restraint against removal of the said existing handle(s) of the plastics material carrier bag.

10

6.    A removable carrying handle according to any one of the preceding Claims, wherein each of said recesses has its bottom of substantial area and at least in part inclined to the vertical as it extends longitudinally of the handle.

15

7.    A removable carrying handle for use with the existing handle(s) of a plastics material carrier bag, said removable carrying handle being substantially as herein described with reference to and/or as illustrated in the accompanying drawings.

20

## Relevant Technical fields

- (i) UK Cl (Edition 1) A4G (G3)
- (ii) Int Cl (Edition 5) A45F 5/10

## Search Examiner

DAVID MARSH

## Databases (see over)

(i) UK Patent Office

(ii)

## Date of Search

26 JANUARY 1993

Documents considered relevant following a search in respect of claims

1-9

Category (see over)	Identity of document and relevant passages	Relevant claim(s)
X	GB 2241161 A (RISSEN) See Figures 1 and 2 page 2 lines 17-34, page 3 lines 30-33 and page 4 lines 6-11	1, 2, 3
X, Y	GB 2113081 A (HERMANSON) See Figures 1-4, 6a, page 1 lines 68-85	X: 1 Y: 2, 3
X	US 4190182 (HICKEY) See Figure 3, column 3 lines 41-47	1, 4, 5, 7
Y	US 3913172 (RICHARDS) See Figures 1 and 2, column 2 lines 18-47	2, 3

Category	Identity of document and relevant passages	Relevant to claim(s)

### Categories of documents

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## HAND CARRIER WITH RESTRAINING MEANS

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**Inventor(s):** HOWLETT KEITH GEORGE

**Applicant(s):** HOWLETT KEITH GEORGE (GB)

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